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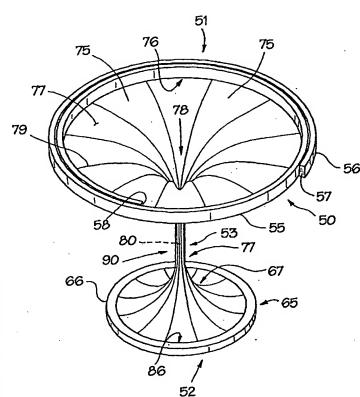
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(54) Title: SEALED SURGICAL ACCESS DEVICE



(57) Abstract: A surgical device (50) is adapted to facilitate access through an incision (100) in a body wall (18) having an inner surface and an outer surface, and into a body cavity of a patinet. The device includes (55) and second (65) retention members adapted to be disposed in proximity to the outer surface and the inner surface of the body wall, respectively. A membrane (75) extending between the two retention members form a throat (90) which is adapted to extend through the incision (100) and form a first funnel extending from the first retention member (55) into the throat (90), and a second funnel extending from the second retention member (65) into the throat (90). The throat of the membrane has characteristics for forming an instrument seal in the presence of an instrument and a zero seal in the absence of an instrument. The first retention member (55) may include a ring with either a fixed or variable diameter.



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#### INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER  IPC(7) : A61B 1/32  US CL : 606/108, 1; 604/206, 208  According to International Patent Classification (IPC) or to both national classification and IPC  B. FIELDS SEARCHED  Minimum documentation searched (classification system followed by classification symbols)  U.S.: 606/108, 1; 604/204, 206, 207, 208; 604/513, 264, 539							
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched							
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)							
C. DOC	UMENTS CONSIDERED TO BE RELEVANT						
Category *	Citation of document, with indication, where app	propriate, of the relevant passages	Relevant to claim No.				
X	US 5,906,577 A (BEANE et al.) 25 May 1999 (25.0	5.1999), cols 5-6.	1, 2, 4, 15, 16, 19				
x	JJS 4,984,564 A (YUEN) 15 January 1991 (15.01.19	19					
x	US 6,033,426 A (KAJI) 07 March 2000 (07.03.2000	1-4, 15, 16					
x	, US 5,652,705 A (DE LA TORRE et al.) 05 August	1, 15-17					
x	-US 5,514,133 A (GOLUB et al.) 07 May 1996 (07.	1, 2, 4, 21					
X, E	US 6,383,162 B1 (SUGARBAKER) 07 May 2002 (C	24					
X, P	US 6,254,534 B1 (BUTLER et al.) 03 July 2001 (03		1				
· A	.US 5,741,298 A (MACLEOD) 21 April 1998 (21.04	1					
A, E	US 2002/0068923 A1(CALDWELL et al.) 06 June 2	1					
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